Karan Tiwari

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EDUCATION

Indian Institute of Information Technology, Design And Manufacturing — Jabalpur, MP
Bachelor of Technology in Computer Science Engineering; CGPA: (8.9/10.0) — *Aug. 2018 – July. 2022*

EXPERIENCE

Goldman Sachs — Bengaluru, India
Software Engineer - Risk Division — *June 2024 - Present*

- **Maker Checker Validation**: Designed and implemented a maker-checker validation mechanism for the **Adjustment UI** (an internal dashboard for applying manual edits), integrating Jira APIs to enhance controls, resulting in a **60%** reduction in manual operational errors.
- **Local RDBMS Automation**: Implemented Liquibase for database version control, enabling developers to easily set up and manage RDBMS tables in their local environment. This streamlined schema migrations, reduced setup issues, and significantly improved developer efficiency.

Paytm Money — Noida, India
Software Engineer — *July 2022 - Jun 2024*

- **Direct Mutual Fund Optimization**: Revamped Mutual Fund's Portfolio architecture, transitioning from the existing model to On The Fly architecture, resulting in reducing AWS cost by around **500$** per month and reducing the average total processing time from around **2hrs** to roughly **5min** .
- **FIFO Logic Investment Migration**: Smoothly orchestrated the migration of **70K** users from an average cost basis to the FIFO (First In, First Out) investment logic method. This strategic transition resulted in a remarkable 90% reduction in customer-reported issues related to invested units, demonstrating a keen focus on operational efficiency and client satisfaction.
- **Mutual Fund Savings Feature**: Designed and implemented code to calculate the savings the user makes while investing in Direct Mutual Fund. Logic is capable of calculating on the fly within a few seconds($\tilde{1}0$sec) in contrast to a scheduled job which could run for 30 minutes, every day for the pre-calculated savings.
- **All In One MF Dashboard**: Contributed to the development of the portfolio module within the All-In-One Mutual Fund Dashboard project. This module provides a comprehensive overview of a user's mutual fund investments, aggregating data across various brokerage platforms to offer a unified and cohesive representation of their portfolio holdings.
- **Next Sip Date Cron TimeOut**: Resolved cron failures related to the subsequent Systematic Investment Plan (SIP) date and Optimized the cron runtime from approximately 1.5 hours to a mere 10 minutes through the implementation of asynchronous processing for the underlying business logic.

Paytm Money — Noida, India
Software Engineer Intern — *Jan 2022 - June 2022*

- **XIRR Calculator**: Studied and implemented **NewtonRaphson algorithm** for finding roots of a real valued function to calculate XIRR for users investments across Paytm Money Mutual Funds.
- **Redis Caching & API optimization**: Acquired proficiency in Redis and in-memory caching methodologies. Successfully implemented these techniques to achieve a significant reduction in latency, ensuring response times consistently below 200 milliseconds.
- **Monitoring And Line Coverage**: Optimized logs and integrated Slack Alert through **incoming webhook** system to reduce debugging time, also enhanced the line coverage of all services, elevating the average from approximately 60% to surpass 90% by leveraging the capabilities of **GitHub Co-pilot**

TECHNICAL SKILLS

Programming Languages: **Java**, C++

Databases: **MySQL**, Redis, MongoDb

Frameworks/Libraries: **Spring Boot**, Spring Security, React, Liquibase, JUnit

AWS Resources: S3, EC2, RDS, VPC

Tools/Technologies: Kafka, Kibana, Linux, Docker, Kubernetes, Github Co-Pilot, SnowFlake